

EXHIBIT R

Mirror Executive Summary, September 2020.

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What is Mirror?

Mirror is a synthetic protocol designed to issue assets that track the price of real world assets, i.e. *synthetics*. Anyone can issue and trade assets fully collateralized in Terra stablecoins, mAssets, tracking the price of everything from traditional equities to cryptocurrencies.

- To **mint** a Mirror asset (mAsset), an issuer must lock up > 150% of the current asset value in Terra stablecoins OR > 200% in other mAssets as collateral. If the value of the asset rises above the collateralization threshold, the stablecoins are liquidated to guarantee solvency of the system.
- To **target** the price of the mAsset, the system reads in underlying asset prices via a decentralized price oracle - prices are updated every 30 seconds. When the price of the mAsset drifts significantly from the primary market, traders are incentivized to purchase / sell the asset to mint / burn to claim the collateral.
- To **trade** a mAsset, the assets are listed on a Uniswap-like AMM dex, Terraswap. Liquidity providers are further incentivized via trading fees (0.25%) and the Mirror governance token (MIR).
- To **burn** a mAsset, the issuer must burn the equal amount of mAssets issued when opening the CDP - the stablecoin collateral is then returned to the issuer.

Examples of Mirror synthetics

The Mirror Protocol intends to launch in early October focusing on exposing major Asian markets to 13 of the most popular US equities. But beyond that, a quorum of Mirror token holders can vote any synthetic into existence. Some possibilities are:

- An inverse token that gains value when the price of an asset falls
- A Tesla stock token **bearing yield**, by collateralizing the synthetic position with Anchor deposit tokens (aUST)
- ... and anything else that has continuous market pricing

Value Proposition

Fair access to popular assets is limited to a few. Synthetic assets provide exposure to an asset without holding the underlying resource. This has a range of advantages, including reducing the friction when switching between different assets (e.g. from Apple shares to synthetic gold), expanding the accessibility of certain assets, and censorship resistance.

- **Accessibility:** In most markets outside of Europe & North America, access to foreign equities and forex markets is highly limited. Crypto allows global accessibility without entry barriers.
- **Fractional Orders:** In traditional finance, to execute a fractional order, multiple fractional orders are bundled together to execute a unitary transaction. The process of gathering all the orders into one requires additional waiting time. By utilizing the blockchain, orders volume is simply represented as a number on the blockchain, so there is no need for the intermediary bundling process.
- **Nearly-Instantaneous Order Execution:** Oftentimes due to the lack of liquidity (price-time-priority order book algorithm), orders can take up to a day to fully execute. Given the fact that Mirror relies on liquidity provided by each individual asset pool, orders can be executed as fast as the blocktime of the network (~ 6 seconds).

Competitive Analysis

- **First mover** - there are currently no decentralized synthetic protocols that provide coverage for equities, even though traditional equities (esp. US) are one of if not the most popular asset class for retail investors.
- **Capital efficient** - Unlike other synthetic asset protocols, the Mirror protocols requires collateral to be in USD-denominated Terra stablecoin (UST) in order to mint a whitelisted asset. As such, this lowers collateral risk and can lead to much more reasonable collateral requirements - 150% for mirror versus 600+% for Synthetix.
- **Low oracle & execution risk** - Ethereum based synthetics protocols have architectures where the oracle posts prices infrequently (1 hour for synthetics, no oracle for UMA). Mirror oracles prices every ~6 seconds.
- **Fairly launched** - Mirror is the only synthetics protocol without a premine of its governance token.

	Mirror	Synthetix	UMA
Equities coverage	O	X	X
Execution speed	5 seconds	Ethereum	Ethereum
Collateral ratio	150%	700%	200%

Oracle speed	6 seconds	1 hour	N/A
Fair launch	O	X	X

The Mirror Token (MIR)**1. Features**

- **CDP closure fees:** When Mirror CDPs are closed, a 1% fee is charged on the collateral (UST). The fees are aggregated daily and used to purchase MIR tokens on Terraswap, which is in turn paid to MIR-UST-LPs on Terraswap.
- **Protocol governance:** The Mirror token can be used to change major parameters in the protocol, such as the trading fee take rate and the position fee. Passing a governance proposal requires a majority approval of Mirror token holders, and takes 1 week(s) to take effect.

2. Distribution

The Mirror token will not be premined. Users can farm Mirror tokens by providing liquidity on Uniswap on Ethereum and equivalent pairs on Terraswap on Terra.

Let T be the EOY1 supply of MIR tokens.

- **Initial airdrop (Genesis)**
 - 10% of T claimable by a snapshot of UNI token holders
 - 5% of T claimable by a snapshot of LUNA stakers
- **Luna staking (Genesis + 1wk / 1 year)**
 - T/10 is airdropped over the course of 1 year to Luna stakers every block. Terraform Labs will not receive MIR tokens
- **Liquidity mining (Genesis + 1 week / 4 years)**
 - mAsset LP-Uniswap: Users can stake mAsset-UST-LP tokens on Uniswap and receive 30% of T, claimable daily. Each of the 12 initial pairs are weighted equally. Rewards decays by 50% each year until the end of year 4.
 - MIR LP-Uniswap: Users can stake MIR-UST-LP tokens on Uniswap and receive 7.5% of T, claimable daily. MIR staking offers approx. 3x rewards given to mAsset LP provision. Rewards decays by 50% each year until the end of year 4.
 - mAsset LP-Terraswap: Users can stake mAsset-UST-LP tokens on Uniswap and receive 30% of T, claimable daily. Each of the 12 initial pairs are weighted equally. Rewards decays by 50% each year until the end of year 4.
 - MIR LP-Terraswap: Users can stake MIR-UST-LP tokens on Terraswap and receive 7.5% of T, claimable daily. MIR staking offers approx. 3x

rewards given to mAsset LP provision. Rewards decays by 50% each year until the end of year 4.

A detailed token release schedule is [here](#).

Mirror token incentives are entirely governed by the Mirror token holders. The weights of each of the pools and the size of the rewards can be changed via governance.

Novel Pre-launch Distribution: Royalty-in-kind

TFL will be deploying its UST reserves to make the markets for mAssets for the first year of the protocol, and expects to farm MIR tokens.

In order to bootstrap strategic support around the protocol, TFL is offering to sell In-Kind royalties from its farming operations:

- TFL will sell rights to **37.5M tokens for \$0.08 per token (Y1 FDV ~\$15M)**.
- 50% of TFL's farming revenues will be split evenly among the royalty purchasers until all tokens are delivered. Full delivery will complete by at most 1 year, but is expected to complete much sooner.

This is a first-of-its-kind distribution scheme that we believe strikes an optimal balance between aligning incentives with strategic stakeholders and a fair launch.

Roadmap

Smart contracts and mobile / web app stand ready to be deployed when Terra's Columbus-4 mainnet upgrade goes live on October 3rd. It will be one of the first smart contracts to launch on Terra mainnet sometime in October 2020.

To try out the demo for the Mirror mobile app, please email yusihyeok@gmail.com with the preferred OS type (iOS & Android).